REMARKS

Upon entry of this amendment, claim 3 will be cancelled and claims 1 and 2 will remain pending.

In the office action mailed January 11, 2007, claim 2 was objected to because of a typographical error in line 5. Claims 1 and 2 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Applicant's admitted prior art (AAPA) in view of U.S. pre-grant publication number 2001/0043203 to Iinuma. Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over the AAPA in view of Iinum and U.S. patent number 6,778,159 to Yamazaki (*Yamazaki*).

The claim rejections were made final.

In response to the Examiner's rejections, claim 2 has been amended to correct a typographical error. Claim 1 has been amended to avoid the cited prior art by incorporating the substance of dependent claim 3 but to *also* recite that the conversion board device outputs a true PWM signal, i.e., a constant-amplitude pulse width modulation (PWM), signal to the LCD module. In other words, claim 1 now requires that the amplitude of the width-varying signal from the conversion board device **not vary**.

In rejecting claim 3, the Examiner relied on *Yamazaki* as teaching a conversion board device that generates a PWM signal for adjusting a common voltage of an LCD device. *Yamazaki* arguably discloses a "conversion board device" as recited in claim 1, however, the PWM signal disclosed and advocated in *Yamazaki* also varies in its amplitude as well as its width. In other words, *Yamazaki* disparages and teaches away from a conventional PWM signal. *Yamazaki* teaches and advocates a signal that is both amplitude-modulated and pulse-width modulated.

In column 3, lines 59-63, Yamazaki states that its "present invention comprises applying...pulses of a plurality of pulse heights and a plurality of pulse widths...." (Emphasis added.) In column 4, lines 5-8, Yamazaki states that varying both the width and the height of pulses allows for different voltage levels to be represented. In column 4, lines 18-29, *Yamazaki* describes how a 64-step voltage gradation is obtained by varying pulses by width and amplitude. In column 6, lines 3-19, *Yamazaki* describes again the advantages of varying both width and magnitude of pulses in order to obtain

greater resolution of voltage levels to be used in an LCD device. Claim 1 of *Yamazaki* actually recites the use of different pulse heights and pulse widths, which vary according to a desired gradation of display intensity at a pixel.

No new matter has been added by the foregoing amendment.

Newton's Telecommunications Dictionary, 18th Edition, defines pulse-width modulation as a method of modulating a signal in which an input signal's D.C. level controls the pulse *width* of digital output pulses. The Microsoft Computer Dictionary, Fourth edition, defines pulse width modulation as a method of encoding information in a signal by varying the duration of pulses. Even Internet definitions of pulse-width modulation say that PWM is a time-varying pulse. No one of ordinary skill in the art would ever consider a PWM signal as recited in the applicant's disclosure as being anything other than a constant-amplitude, pulse-width varying signal. No new matter has been added.

Since *Yamazaki* requires and teaches away from the use of a true PWM signal having time-varying but fixed amplitude pulses, the amendment to claim 1 avoids the *Yamazaki* reference and makes claim 1 patentably allowable over the art cited by the Examiner. Since claim 1 is allowable, claim 2 is allowable as well. Reconsideration of the claims is respectfully requested.

Sincerely,

Dated: March 20, 2007

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